

**TRAFFIC CONTROL
CORPORATION**

10435 ARGONNE WOODS DRIVE
WOODRIDGE, IL 60517
P:574-243-0901 F:630-543-5050

QUOTATION

Number 611743

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To 14638
WEST LAFAYETTE, CITY OF
705 SOUTH RIVER ROAD
WEST LAFAYETTE IN 47906
USA

Attn
Email
Phone 765-775-5242 Fax 765-775-5159

Quote Date 10/12/2016 Expires 1/10/2017
Terms NET 30 BASED ON APPROVED CREDIT
FOB DESTINATION-FRT INCLUDED
Salesperson DOUG FLANAGAN
Email dflanagan@trafficcontrolcorp.com

Letting Date 5/18/2016

Book/Call/Item

Contract No TRAFFIC SIGNALS CENT

Location WEST LAFAYETTE - CITY WIDE

Description CENTRACS INSTALLATION & MAINTENANCE

| Part Number | Description | Qty/UM | Unit Price | Net Price |
|-------------|---|---------|--|------------|
| (A) 1.1 | ABSOLUTE SOFTWARE REQUIREMENTS SOFTWARE, LICENSING AND INSTALLATION, INTEGRATION, TRAINING, TESTING, FOUR YEARS OF SOFTWARE MAINTENANCE, AND FOUR ECONOLITE COBALT-G CONTROLLERS | 1.00 EA | 166,195.75 | 166,195.75 |
| | | | ↓ + \$2400 difference due to Cobalts | |
| (B) 1.2 | OPTIONAL SOFTWARE REQUIREMENTS ENHANCED MOEs MODULE INCLUDING 4 YEARS OF SOFTWARE MAINTENANCE | 1.00 EA | 40,360.00 ✓ | 40,360.00 |
| (C) | CENTRAL SYSTEM PERFORMANCE INSPECTION TCC SUGGESTS AN ONGOING CENTRAL SYSTEM PERFORMANCE INSPECTION. UNDER THE TERMS OF THIS AGREEMENT, TCC WOULD CONDUCT A ONE DAY VISIT BY A TRAINED AND QUALIFIED SYSTEM TECHNICIAN AT MONTHLY INTERVALS, SCHEDULED IN COORDINATION WITH THE CITY, TO PERFORM A COMPREHENSIVE INSPECTION OF THE CITY'S ATMS, INCLUSIVE OF ALL ASSOCIATED SOFTWARE AND HARWARE, IN ORDER TO EVALUATE THE PERFORMANCE OF THE SYSTEM AND REPORT ANY DISCOVERIES TO THE CLIENT. | 1.00 EA | 12,000.00 ✓ | 12,000.00 |
| | | | (A)+(B)+(C) \$218,555.75 Total | |
| X | NTCIP-COMPLIANT RWIS HIGH SIERRA ELECTRONICS - ROAD WEATHER STATION - INCLUDES DATAWISE SOFTWARE, ROAD TEMPERATURE/MOISTURE SENSOR, DEEP PAVEMENT TEMPERATURE SENSOR | 1.00 EA | 23,582.00 | 23,582.00 |

Item Total**242,137.75**

Pricing does not include applicable sales taxes. If order is to be exempt sales tax, documentation must be provided at time of order.
Additional terms may apply. Review our full Terms & Conditions of Sale at www.trafficcontrolcorp.com.

• \$2,432 difference
• due to Cobalt controllers instead of Asc/3 (?)

1. Estimated Costs

| | Item | Quantity | Unit Price | Extended Price |
|--|--|----------|--------------|----------------|
| (A) 1.1 Absolute Software Requirements | Software, Licensing and Installation, Integration, Training, Testing, four years of software maintenance, and four Econolite controllers | L.S | \$163,763.75 | \$163,763.75 |

| | Item | Quantity | Unit Price | Extended Price |
|------------------------------------|---|-------------------|-------------|----------------|
| 1.2 Optional Software Requirements | X Centrac 50 Intersection License Expansion** | L.S. | \$30,000.00 | \$30,000.00 |
| | (B) Enhanced MOEs Module | L.S | \$25,000.00 | \$25,000.00 |
| | X Server-to Server Module, includes license, installation, training, and testing | L.S. | \$23,906.25 | \$23,905.25 |
| | X SMA Adder Centrac 50 Intersection License Expansion | 1 Year | \$1,920.00 | \$1,920.00 |
| | (B) SMA Adder Enhanced MOEs Module | 4 Years 1 Year | \$3,840.00 | \$3,840.00 |
| | X SMA Adder Server-to-Server Module | 1 Year | \$2,400.00 | \$2,400.00 |

**Price valid if purchased as part of initial system procurement. If purchased later, price would be \$56,250.00

2. Costs to maintain the Central Software

The cost to maintain Econolite's Software Maintenance Agreement is \$8,640.00/year, price may fluctuate after four years of included software maintenance (1 year warranty + 3 years of Bronze SMA).

3. Pricing Assumptions

For this project, the City will be responsible for providing all system hardware, to include a virtual server (database/application), workstations, laptops, networking equipment and associated peripherals. The City-provided Virtual Machine (VM) environment must meet Centrac's hardware requirements. This VM environment should be either VMWare or Microsoft's HyperV. The City will also be responsible for providing the operating system for the virtual server along with Microsoft SQL Server with the appropriate quantity of client access licenses.

The Project Manager will review all the hardware/COTS requirements with the City prior to the City procuring any items. Any incompatible hardware not supplied by the TCC/Econolite team will be the responsibility of the City to resolve. Should additional components be necessary or requested, TCC will provide an updated procurement list and corresponding pricing.

Virtual Machine Minimum Specification Requirements

| Item | Description | Quantity |
|------------------------|---|----------|
| Processor: | Intel Xeon E5-2640 v3 2.6GHz processor, 20M Cache | 2 |
| Memory: | 32GB Memory | 1 |
| Hard Drive: | 300GB 10K RPM SAS 6Gbps 2.5in Hot-plug Hard Drive, 3.5 HYB CARR | 4 |
| Hard Drive Controller: | PERC H330 RAID Controller for RAID 5 | 1 |
| Operating System: | Windows SQL Server 2014R2 | 1 |
| NIC: | Broadcom 5720 QP 1Gb Network Daughter Card | 1 |
| Server Backup | 4 TByte TeraStation III Rackmount NAS Server | 1 |

After Econolite receives remote access to the City's virtual server, installation of *Centracs* can proceed. The City will also be responsible for Operating System installation and appropriate updates prior to Econolite's remote installation of SQL Server and the *Centracs* software. A team of Econolite engineers will then test the system hardware, install the software, prepare the base map graphic, and document the final system for all configurations.

TCC/Econolite will be responsible for on-site system installation, to include configuring the system using one applications/database server and up to five City-provided workstations. During on-site integration, TCC/Econolite will develop intersection graphics for 39 intersections and provide field integration service of these controllers into the ATMS.

For this proposal, TCC has assumed a working Ethernet communications network is in place and ready for system integration and testing. In the event communications to controllers are not available or online by the arrival date of the system testing team, locally connected controllers will be used for the system testing in place of field controllers. Performance of the system will be verified by demonstrating communication with each intersection controller via the status display and by uploads and downloads of the controller database.

Performance of *Centracs* hinges on the ability of the network to deliver status/polling packets in a timely fashion. Therefore, for IP networks we recommend that a guaranteed delivery mechanism such as QoS or 802.1p is implemented in the communications infrastructure to accomplish this. All IP communication between *Centracs* servers and field devices requires static IP addresses. If requested, TCC/Econolite can provide direction and/or recommend hardware for the communications infrastructure at an additional cost however we cannot accept responsibility for the configuration or performance of third-party manufacturer's equipment. Additionally, *Centracs* utilizes NTCIP and IP for network communications. These protocols do not contain any built in security. Therefore it is the City's responsibility to secure its traffic control network both physically and logically from public access (Internet) and from the TMC/City network at large.

4. Similar Cost References

| Customer | Description | Sale Price |
|-------------------|---|--------------|
| Elkhart County | 50 licenses of Centracs including – advanced CCTV module, SYNCRO module, and MOE module. | \$265,770.00 |
| City of Lafayette | 100 licenses of Centracs including - MOE module, tower radio, computer, controllers, and communication equipment. | \$257,427.00 |
| | | |

5. Other Considerations

| Item | Quantity | Unit Price | Extended Price |
|--|----------|-------------|----------------|
| Central System Inspection Agreement (Optional) | 1 Year | \$12,000.00 | 12,000.00 |
| | | | |

TCC suggests an ongoing Central System Inspection Agreement. Under the terms of this agreement, TCC would conduct a one (1) day visit by a trained and qualified system technician at monthly intervals to perform a comprehensive inspection of the City's ATMS, inclusive of all associated software and hardware, in order to evaluate the performance of the system and report any discoveries to the client.

Upon completion of the monthly inspection TCC will deliver a completed checklist document to the City summarizing the operational condition and current status of the system. TCC reports will highlight any system components, software or hardware, which may require additional service in order to bring the system to an optimal operating condition. The report will include the technician's findings and recommendations relative to repairs that must be made during the visit or scheduled outside of the current visit.